

AMENDMENTS TO THE CLAIMS

The below listing of claims replaces all prior versions and listings of claims in the application:

1. (Currently Amended) A method of boring a tunnel by means of an earth pressure balance tunnel boring machine, comprising the injection at a cutting head of the earth pressure balance tunnel boring machine of a foamed aqueous surfactant solution and an aqueous solution of a water-soluble acrylic acid-based polymer, wherein the foamed aqueous surfactant solution is injected at a rate of from 0.2 to 4 Kg dry material per cubic meter of excavated soil, and wherein the acrylic acid-based polymer is injected at a rate of from 0.05 to 2 Kg dry polymer per cubic meter of excavated soil.
2. (Previously Presented) The method according to claim 1, in which the foamed aqueous surfactant solution and the aqueous solution of a water-soluble acrylic acid-based polymer are added as a single material.
3. (Currently Amended) A foaming solution for use with earth pressure balance tunnel boring machines, comprising an aqueous solution of an acrylic acid-based polymer and an anionic surfactant ~~selected from sulphate esters, sulphate ethers and sulphonates~~, wherein the acrylic acid-based polymer has a molecular weight from 2,000 to 20,000, and wherein the surfactant comprises at least one of C₈₋₂₂ fatty alcohol sulphate salts, C₈₋₂₂ fatty alcohol ether sulphate salts, or mixtures thereof.
- 4.-7. (Canceled)
8. (Previously Presented) The foaming solution according to claim 3, wherein the surfactant comprises monoisopropanol ammonium lauryl alcohol sulphate.

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9. (Currently Amended) The foaming solution according to claim [[7]]3, wherein the C₈₋₂₂ fatty alcohol ether sulphate salts comprise at least one of:

- a. lauryl alcohol;
- b. an ether formed with an alkylene oxide chain of from 1 to 3 alkylene oxide units;
or
- c. a salt forming cation selected from alkali metal, magnesium and alkanolamine.

10. (Canceled)

11. (Previously Presented) The foaming solution according to claim 3, wherein the acrylic acid-based polymer has a molecular weight from 2,000 to 10,000.

12. (Previously Presented) The foaming solution according to claim 3, wherein the acrylic acid-based polymer is derived from acrylic acid.

13. (Previously Presented) The foaming solution according to claim 3, wherein the acrylic acid-based polymer is a salt.

14. (Previously Presented) The foaming solution according to claim 13, wherein the acrylic acid-based polymer salt comprises a monovalent cation that is at least one of sodium, potassium, ammonium, tertiary amine, quaternary amine or mixtures thereof.

15. (Currently Amended) The method according to claim 1A method of boring a tunnel by means of an earth pressure balance tunnel boring machine, comprising the injection at a cutting head of the earth pressure balance tunnel boring machine of a foamed aqueous surfactant solution and an aqueous solution of a water-soluble acrylic acid-based polymer, wherein the foamed aqueous surfactant solution and the aqueous solution of water-soluble acrylic acid-based polymer are added separately.

16. (Canceled)

17. (Previously Presented) The method according to claim 1, wherein the foamed aqueous surfactant solution is injected at a rate of from 0.5 to 2 Kg dry material per cubic meter of excavated soil.

18. (Canceled).

19. (Previously Presented) The method according to claim 1, wherein the acrylic acid-based polymer is injected at a rate of from 0.1 to 1 Kg dry polymer per cubic meter of excavated soil.

20. (Previously Presented) The method according to claim 1, wherein the acrylic acid-based polymer is injected at a rate of from 0.2 to 0.5 Kg dry polymer per cubic meter of excavated soil.

21. (New) The method according to claim 1, wherein the foamed aqueous surfactant solution comprises an anionic surfactant selected from sulphate esters, sulphate ethers and sulphonates.

22. (New) The method according to claim 21, wherein the surfactant comprises a lauryl ether sulphate, whose ether portion consists of two oxyethyl units maximum.

23. (New) The method according to claim 21, wherein the surfactant comprises a polyalkylene alkyl ether sulphate, and wherein the polyalkylene oxide chain of the polyalkylene alkyl ether sulphate has an average chain length of from 1-3 alkylene oxide units.

24. (New) The method according to claim 21, wherein the surfactant comprises at least one of α -olefin sulphonate, C₈₋₂₂ fatty alcohol sulphate salts, C₈₋₂₂ fatty alcohol ether sulphate salts or mixtures thereof.

25. (New) The method according to claim 21, wherein the surfactant comprises monoisopropanol ammonium lauryl alcohol sulphate.

26. (New) The method according to claim 21, wherein the acrylic acid-based polymer is an acrylic acid-based polymer salt comprising a monovalent cation that is at least one of sodium, potassium, ammonium, tertiary amine, quaternary amine or mixtures thereof.